

### **ABSTRACT OF THE DISCLOSURE**

A method for tracking carrier frequency and sampling frequency offsets in an OFDM wireless communication system comprises: (a) detecting data received from the transmitter using a first signal, and tracking a phase offset caused by the carrier frequency offset using the detected received data;  
5 (b) detecting the data received from the transmitter using the first signal, and tracking the phase offset caused by the sampling frequency offset using the detected received data; (c) compensating for the phase offset caused by the carrier frequency offset between the transmitter and the receiver according to  
10 the phase offset tracked in (a); and (d) compensating for the phase offset caused by the sampling frequency offset between the transmitter and the receiver according to the phase offset tracked in (b).